

$^{208}\text{Pb}(\alpha, ^6\text{He})$ [1986Ku12,1982Ge06,1981Ta19](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 201,346 (2025)	21-Jan-2025

$^{208}\text{Pb}(\alpha, ^6\text{He})$: [1981Ta19](#) with E=64.3 MeV, 2 levels reported; [1982Ge06](#) with E=218 MeV, FWHM $\approx$ 250 keV, 10 levels reported. ([1982GaZR](#) and [1982GeZU](#) by same authors). [1986Ku12](#) with E=109 MeV, FWHM $\approx$ 70 keV, 24 levels reported.

Others (2n removal): [1976To08](#): $^{208}\text{Pb}(^{12}\text{C}, ^{14}\text{C})$ with E=97.9 MeV, 2 levels reported; [1976Ba03](#): $^{208}\text{Pb}(^{18}\text{O}, ^{20}\text{O})$ with E=93 MeV and FWHM $\approx$ 200 keV; [1977FrZG](#): $^{208}\text{Pb}(^{16}\text{O}, ^{18}\text{O})$ with E $\approx$ 71 MeV, 2 levels reported; [1988Re07](#): $^{208}\text{Pb}(^{48}\text{Ti}, ^{50}\text{Ti})$ with E $\approx$ 300 MeV and $\sigma(^{48}\text{Ti}, ^{50}\text{Ti})=54$ mb; [1990Re13](#): $^{208}\text{Pb}(^{64}\text{Ni}, ^{66}\text{Ni})$ with E=380 MeV and $\sigma(^{64}\text{Ni}, ^{66}\text{Ni})=40$ mb; $^{208}\text{Pb}(^{80}\text{Se}, ^{82}\text{Se})$ with E=525 MeV and $\sigma(^{80}\text{Se}, ^{82}\text{Se})=47$ mb; [2003Kr13](#): $^{208}\text{Pb}(^{64}\text{Ni}, ^{66}\text{Ni})$ with E=350 MeV $\sigma(^{64}\text{Ni}, ^{66}\text{Ni})=50$ mb 2; [2003Pe08](#): $^{208}\text{Pb}(^{118}\text{Sn}, ^{120}\text{Sn})$ with E=5.14 and 5.32 MeV/nucleon.

 ^{206}Pb Levels

E(level) [†]	J^π [‡]	L [‡]	Comments
0.0			
800	2 ⁺	2	
1340 [#]	3 ⁺ [#]		
1470			
1680	4 ⁺	4	
1780			
2000			
2150			
2200	7 ⁻		J^π : From Adopted Levels. 7 ⁺ given in 1982Ge06 .
2320			
2420			
2660	9 ⁻	9	
2780			
2870			
2930			
3010			
3120 [#]	3 ⁺ [#]		
3260	6 ⁺	6	
3770		2 ^a	
3960	6 ⁺ , (4 ⁺)	6, (4)	
4470 ^{&} 40	(6 ⁺ , 7 ⁻)	(6, 7)	
5360 [@]		(6) ^a	
5380 ^{&} 60	9 ⁻	9	
5410 [@]			
6100 ^{&} 70	8 ⁺	8	
6180 [@]		8	
7350 ^{&} 80		≥ 7	

[†] From [1986Ku12](#) unless otherwise stated. ΔE quoted by author to 10 keV.

[‡] From [1982Ge06](#) unless otherwise stated. $^6\text{He}(\theta)$ were also measured by [1986Ku12](#) for the reported levels, but they indicate that all except four of their J^π assignments are from the literature.

[#] From [1981Ta19](#).

[@] From decomposition of a complex peak, with the assistance of (p,t) data.

[&] From [1982Ge06](#).

^a From [1986Ku12](#).